**BOARD OF SUPERVISORS**

Brown County

305 E. WALNUT STREET
P. O. BOX 23600
GREEN BAY, WISCONSIN 54305-3600
PHONE (920) 448-4015 FAX (920) 448-6221

**LAND CONSERVATION SUBCOMMITTEE**
Norbert Dantinne, Jr., Chair
Dave Kaster, Vice Chair
Bernie Erickson, Dave Landwehr, Tom Sieber

**LAND CONSERVATION SUBCOMMITTEE**
**Monday, March 23, 2015**
**6:00 p.m. (PD&T to Follow)**
**Room 161, UW Extension**
**1150 Bellevue Street**

**NOTICE IS HEREBY GIVEN THAT THE COMMITTEE MAY TAKE ACTION ON ANY ITEMS LISTED ON THE AGENDA**

I. Call Meeting to Order.
II. Approve/Modify Agenda.
III. Approve/Modify Minutes of February 23, 2015.

**Comments from the Public**

1. Budget Status Financial Report, December, 2014 (unaudited).
2. Resolution re: Change in Table of Organization for the Land and Water Conservation Department (Agronomist Technician).
3. Director's Report.
4. Such Other Matters as Authorized by Law.
5. Adjourn.

Norb Dantinne, Jr., Chair

**Notice is hereby given that action by the Committee may be taken on any of the items which are described or listed in this agenda. Please take notice that it is possible additional members of the Board of Supervisors may attend this meeting, resulting in a majority or quorum of the Board of Supervisors. This may constitute a meeting of the Board of Supervisors for purposes of discussion and information gathering relative to this agenda.**

**PROCEEDINGS OF THE BROWN COUNTY**
**LAND CONSERVATION SUBCOMMITTEE**

Pursuant to Section 18.94 Wis. Stats., a regular meeting of the **Brown County Land Conservation Subcommittee** was held on Monday, February 23, 2015 in Room 161, UW Extension, 1150 Bellevue Street, Green Bay, WI

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**Present:** Chairman Norb Dantinne, Supervisor Bernie Erickson, Supervisor Dave Landwehr, Supervisor Tom Sieber, Supervisor Dave Kaster
**Also Present:** Jim Jolly

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I. **Call Meeting to Order**
The meeting was called to order by Chairman Dantinne at 6:03 pm.

II. **Approve/Modify Agenda**

**Motion made by Supervisor Sieber, Seconded by Supervisor Kaster to approve. Vote Taken. MOTION CARRIED UNANIMOUSLY.**

III. **Approve/Modify Minutes of January 26, 2015**

**Motion made by Supervisor Kaster, Seconded by Supervisor Erickson to approve. Vote Taken. MOTION CARRIED UNANIMOUSLY.**

**Comments from the Public**

1. **2014 to 2015 Carryover Funds.**

**Motion made by Supervisor Sieber, Seconded by Supervisor Landwehr to approve. Vote Taken. MOTION CARRIED UNANIMOUSLY.**

2. **Such Other Matters as Authorized by Law. None.**

**Motion made by Supervisor Sieber, Seconded by Supervisor Landwehr to adjourn at 6:04 pm. Vote Taken. MOTION CARRIED UNANIMOUSLY.**

Respectfully submitted,

Brian B. Lueth
Recording Secretary

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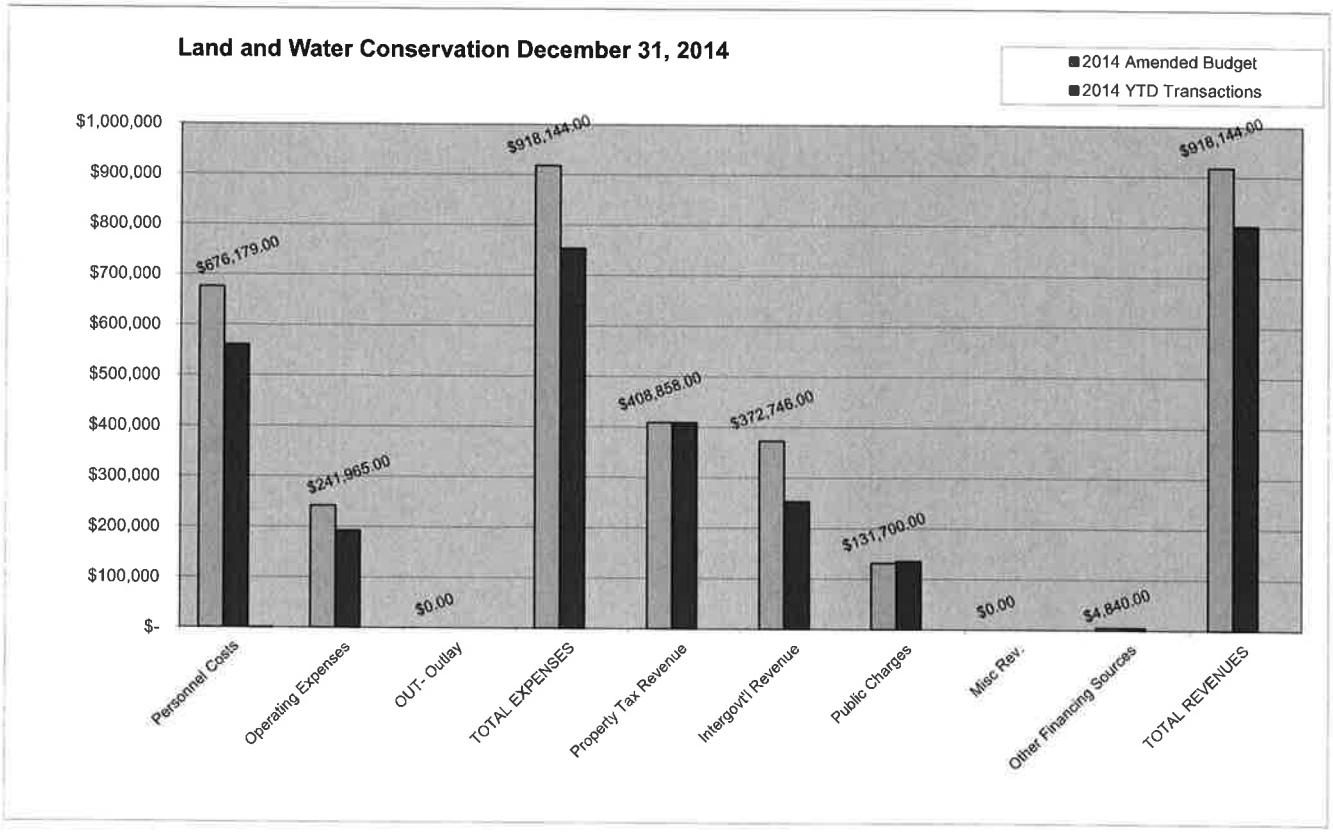
**Brown County Land & Water Conservation**
**Budget Status Report (unaudited)**
December 31, 2014

| | 2014 Amended Budget | 2014 YTD Transactions | | 2013 Amended Budget | 2013 YTD Transactions |
|---|---|---|---|---|---|
| Personnel Costs | $676,179.00 | $561,389.59 | Personnel Costs | $590,799.00 | $520,222.89 |
| Operating Expenses | $241,965.00 | $192,647.48 | Operating Expenses | $252,330.00 | $239,120.30 |
| OUT- Outlay | $0.00 | $0.00 | OUT- Outlay | $29,163.00 | $27,540.00 |
| **TOTAL EXPENSES** | **$918,144.00** | **$754,037.07** | **TOTAL EXPENSES** | **$872,292.00** | **$786,883.19** |
| Property Tax Revenue | $408,858.00 | $408,858.00 | Property Tax Revenue | $392,030.00 | $392,030.00 |
| Intergovt'l Revenue | $372,746.00 | $253,324.58 | Intergovt'l Revenue | $246,520.00 | $249,423.79 |
| Public Charges | $131,700.00 | $135,795.14 | Public Charges | $143,000.00 | $137,178.39 |
| Misc Rev. | $0.00 | $0.00 | Misc Rev. | $0.00 | $250.00 |
| Other Financing Sources | $4,840.00 | $5,323.82 | Other Financing Sources | $15,742.00 | $13,966.30 |
| **TOTAL REVENUES** | **$918,144.00** | **$803,301.54** | **TOTAL REVENUES** | **$797,292.00** | **$792,848.48** |



April 15, 2015

TO THE HONORABLE CHAIRMAN AND MEMBERS
OF THE BROWN COUNTY BOARD OF SUPERVISORS

Ladies and Gentlemen:

**RESOLUTION REGARDING CHANGE IN TABLE OF ORGANIZATION FOR THE LAND AND WATER CONSERVATION DEPARTMENT (AGRONOMIST TECHNICIAN)**

WHEREAS, a partnering organization, Fox Wolf Watershed Alliance, submitted a grant application on behalf of Outagamie, Calumet and Brown counties to implement a sediment and phosphorus reduction program with agricultural producers in the Plum/Kankapot watersheds. Brown County's portion of this project area lies in and around the Wrightstown area; and

WHEREAS, Great Lakes Restoration Initiative dollars were applied for through the EPA for the *Targeting Outcome-Based Sediment Reduction in the Lower Fox Watershed* project; and

WHEREAS, the grant was approved by the EPA with a project start in 2015; and

WHEREAS, the project includes adding a grant funded 1.00 FTE Agronomist Technician to the Land and Water Conservation table of organization for a five year period starting in 2015 to complete the work required in the grant; and

WHEREAS, when the grant funding ends, the position will end and be eliminated from the Land and Water Conservation table of organization; and

NOW, THEREFORE, BE IT RESOLVED by the Brown County Board of Supervisors, the addition of a grant funded 1.00 FTE Agronomist Technician to the Land and Water Conservation table of organization; and

BE IT FURTHER RESOLVED, when the grant funding ends, or is not fully funded, the position will end and be eliminated from the Land and Water Conservation table of organization.

**Budget Impact:**

Land and Water Conservation Table of Organization
(Add 1.00 FTE Agronomist Technician)

| **Annual Budget Impact** | **FTE** | **Addition/ Deletion** | **Salary** | **Fringe** | **Total** |
|---|---|---|---|---|---|
| Agronomist Technician | 1.00 | Addition | $49,774 | $23,680 | $73,454 |
| **Annual Budget Impact** | | | **$49,774** | **$23,680** | **$73,454** |

| **Partial Year Budget Impact** (4/1/15 – 12/31/15) | **FTE** | **Addition/ Deletion** | **Salary** | **Fringe** | **Total** |
|---|---|---|---|---|---|
| Agronomist Technician | 1.00 | Addition | $37,331 | $17,760 | $55,091 |
| **Partial Year Budget Impact** | | | **$37,331** | **$17,760** | **$55,091** |

*Fiscal Note: This resolution does not require an appropriation from the General Fund. An Environmental Protection Agency grant will fund the increased cost.*

Respectfully submitted,

LAND CONSERVATION
SUB-COMMITTEE

PLANNING, DEVELOPMENT &
TRANSPORTATION COMMITTEE

EXECUTIVE COMMITTEE

Approved By:

_____
TROY STRECKENBACH
COUNTY EXECUTIVE

Date Signed: _____

Authored by Human Resources

Approved as to form by Corporation Counsel

**BOARD OF SUPERVISORS ROLL CALL #_____**

**Motion made by Supervisor _____**

**Seconded by Supervisor _____**

| SUPERVISORS | DIST. # | AYES | NAYS | ABSTAIN | EXCUSED |
|---|---|---|---|---|---|
| SIEBER | 1 | | | | |
| DE WANE | 2 | | | | |
| NICHOLSON | 3 | | | | |
| HOYER | 4 | | | | |
| GRUSZYNSKI | 5 | | | | |
| HAEFS | 6 | | | | |
| ERICKSON | 7 | | | | |
| ZIMA | 8 | | | | |
| EVANS | 9 | | | | |
| KAYE | 10 | | | | |
| BUCKLEY | 11 | | | | |
| LANDWEHR | 12 | | | | |
| DANTINNE, JR | 13 | | | | |

| SUPERVISORS | DIST. # | AYES | NAYS | ABSTAIN | EXCUSED |
|---|---|---|---|---|---|
| LA VIOLETTE | 14 | | | | |
| KATERS | 15 | | | | |
| KASTER | 16 | | | | |
| VAN DYCK | 17 | | | | |
| JAMIR | 18 | | | | |
| ROBINSON | 19 | | | | |
| CLANCY | 20 | | | | |
| CAMPBELL | 21 | | | | |
| MOYNIHAN, JR. | 22 | | | | |
| STEFFEN | 23 | | | | |
| SCHADEWALD | 24 | | | | |
| LUND | 25 | | | | |
| FEWELL | 26 | | | | |

**Total Votes Cast _____**

**Motion: Adopted _____ Defeated _____ Tabled _____**

**Targeting Outcome-Based Sediment Reduction in the Lower Fox Watershed**
Great Lakes Restoration Initiative
2014 Request for Applications

**a. SUMMARY INFORMATION PAGE:**

i. **Funding Opportunity Number** - EPAR5-GL2014-2.
**Category** - Sediment Reduction Projects in Priority Watersheds.

ii. **Project Title:** Targeting Outcome-Based Sediment Reduction in the Lower Fox Watershed

iii. **Applicant Information:**
Name: Fox-Wolf Watershed Alliance
Address: 1000 N. Ballard Road, Appleton, WI 54911
Contact Person: Jessica Schultz, Project Manager
Phone: (920)858-4246
Email: jessica@fwwa.org

Address used for Grants.gov submission is 1445 McMahon Drive, Neenah, WI 54956
Our organization recently moved.

iv. **Type of Organization:**

Not for Profit/Non-profit

v. **Proposed Funding Request:**

$4,196,221

vi. **Project Duration:**

Anticipated Start Date: November 1, 2014
Anticipated End Date: October 31, 2019

vii. **Brief Project Description:**

This project will reduce agricultural sediment and nutrient loading to the Lower Fox River and Green Bay by installing conservation practices in key sections of the Plum and Kankapot Creeks, two of the highest loading sediment per cropland acre sub-watersheds in the Lower Fox River. The project will test innovative practices and monitor the effects of those practices to guide implementation throughout the region. This project will also advance Water Quality Trading in the Lower Fox River Watershed in order to ensure the permanency of the practices installed and create a funding mechanism for future projects in the watershed.

viii. **Project Location:**

HUC code 04030204
Latitude 44.270028 and Longitude -88.171129
Wisconsin, Congressional District # 8, Outagamie County, Appleton, 54914



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## b. WORK PLAN

1. **Project Summary and Approach**

   a. **Relevance to the Great Lakes**

Green Bay, while representing only ~7% of the surface area and ~1.4% of the volume of Lake Michigan, contains one-third of the watershed of the lake, and receives approximately one-third of the total sediment and nutrient loading to the Lake Michigan basin, predominately from the Fox River at the southern end of the bay. Based on the Great Lakes Watershed Management System[1], Plum Creek (0.376 t/ac/yr) and Kankapot Creek (0.283 t/ac/yr) rank the highest with respect to sediment loading of all HUC 12 watersheds in the Lower Fox River sub-basin.

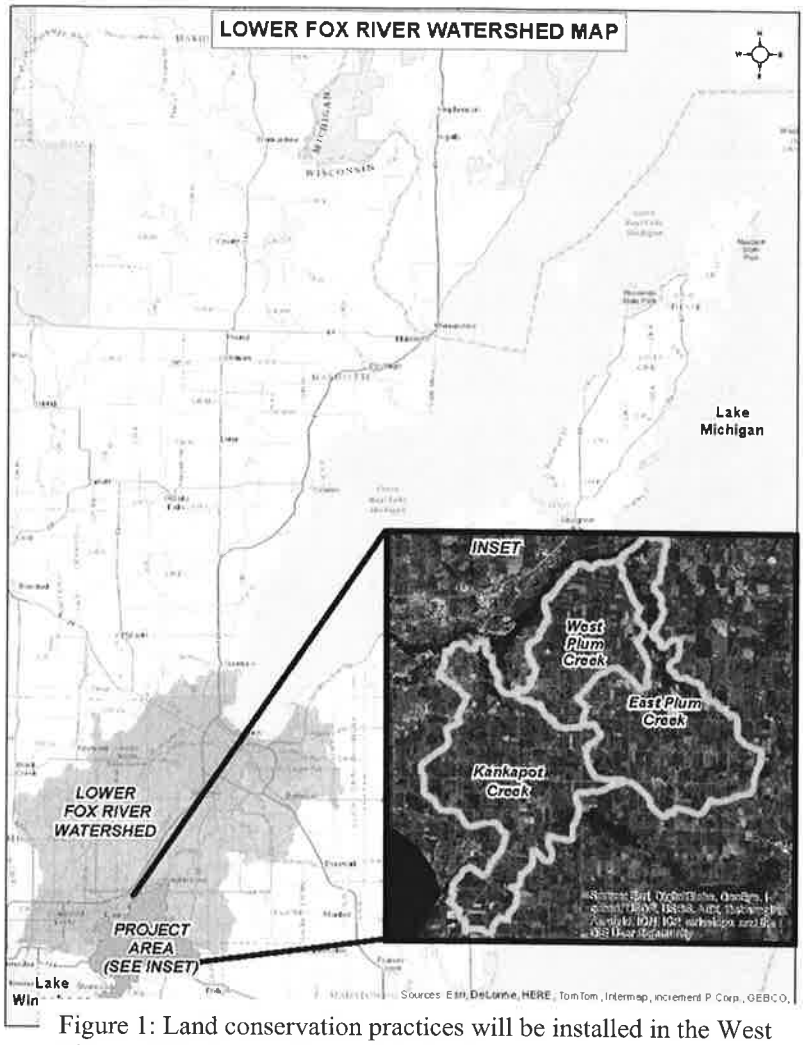


Figure 1: Land conservation practices will be installed in the West Plum and Kankapot sub-watersheds within the Lower Fox River Watershed. The West Plum and East Plum will be monitored an analyzed in a paired watershed study.

Dairy farms have a large impact within this project area. Due to the large number of cattle in the area, crop rotations have changed to include a greater amount of corn silage, leaving little residue left to hold soil in place during spring runoff. The increased cattle numbers also lead to increased manure and the need to for producers to apply manure to cropland in both fall and spring. This manure is required to be incorporated, which means additional tillage passes and less residue on the surface to protect and hold soil in place.

This project will reduce the amount of sediment and phosphorus leaving the Plum and Kankapot Creek sub-watersheds and prevent the pollutants from entering the Lower Fox River. The project will be successful by installing best management practices that extend beyond the typical NRCS practices and incorporating innovative practices and new technologies that will allow local producers to apply seed and incorporate manure in untraditional ways, increasing the ability to plant and maintain cover crops.

Modeling completed by the University of Wisconsin Green Bay shows that by protecting the worst 5% sediment producing areas of Plum and Kankapot Creek sub-watersheds, that sediment runoff would be reduced by about 4500 t/yr. If the worst 20% sediment producing areas were protected, sediment runoff would be reduced by about 8600 t/yr. Furthermore, if we assume a default cost ($393/ac) to convert these sediment contributing areas to grass, the cost-to-benefit ratio is lowest for Plum and Kankapot Creeks relative to all other watersheds in the LFR. See figure 2.

[1] Great Lakes Watershed Management System - http://35.8.121.111/glwms/map.aspx#

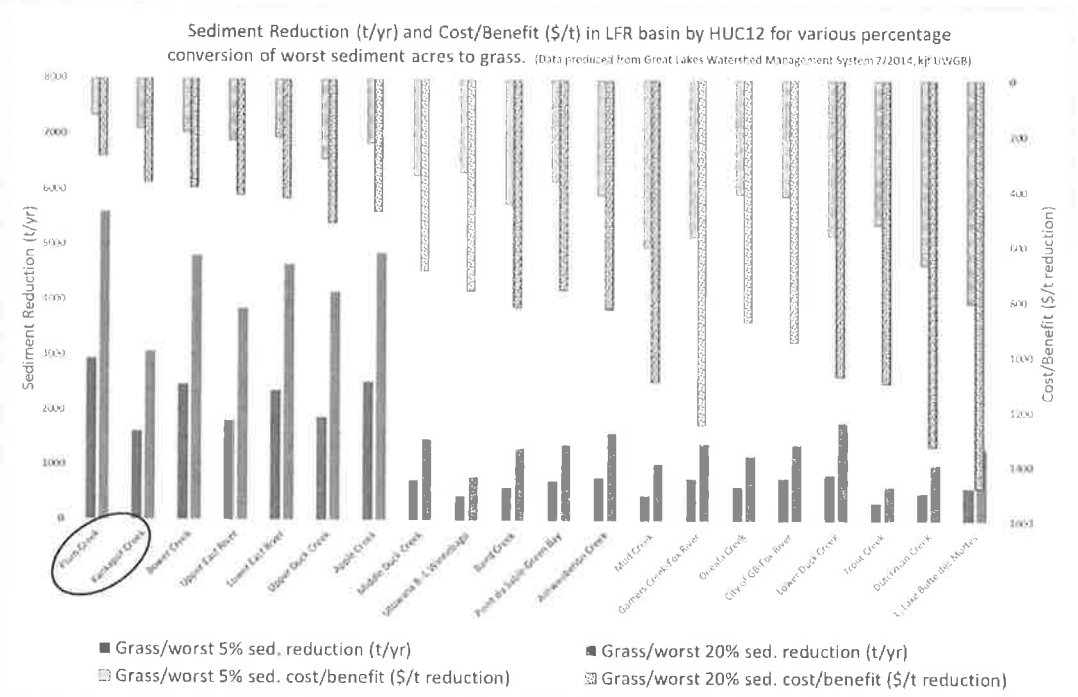


Figure 2: Modeling analysis conducted by UW Green Bay shows the greatest potential for sediment reduction at the least cost in the Plum Creek

Monitoring data for a 3 year period from 2011-2013 show that 85% of the TSS load from the Plum/Kankapot watersheds came from, on average 4 events/yr (~7 d/yr) during that timeframe. The highest delivery associated with spring runoff each year and secondary event in June/July each year before canopy is obtained by crops to hold soil in place. The practices installed through this project will establish nearly year round vegetative soil cover and/or alternative soil amendments, thereby significantly reducing soil loss and phosphorus runoff during major storm events and during the critical time periods when fields are typically left uncovered. In locations were vegetative cover and soil amendments are not enough to prevent soil loss, alternative practices are proposed, like Water and Sediment Control Basin with modified outlet treatments and extending existing technology to inform landowners of weather related risks.

Project relevance to the Great Lakes Restoration Initiative (GLRI) Action Plan: The Great Lakes face a number of tough challenges. One of the most significant of these challenges, identified in the GLRI Action Plan, is nonpoint source pollution. The results of implementing this project will contribute considerably to all of the long-term goals of the Nearshore Health and Nonpoint Source Pollution focus area. The goal that sums this project up the best is "Goal 5: A significant reduction in soil erosion and the loading of sediments, nutrients and pollutants into tributaries is achieved through greater implementation of practices that conserve soil and slow overland flow." http://greatlakesrestoration.us/action/wp-content/uploads/glri_actionplan.pdf

Project relevance to Goal #4.3.3 (EPA Strategic Plan- Improve the Health of Great Lakes Ecosystems): The health of Lake Michigan depends on the stewardship of its individual watershed ecosystems. The Plum & Kankapot Creek watersheds in Outagamie County are part of the Lower Fox River Basin, which drains into the Bay of Green which has been identified as an Area of Concern (AOC). Implementation activities related to education, remediation, restoration, and pollution prevention are essential in this watershed. Buffer strip installation and wetland protection along rural agricultural surface waters would not only reduce loading to the AOC but would also help protect the health of sensitive ecosystems.http://www.epa.gov/planandbudget/strategicplan.html

**b. Quality system documentation**

This project will include the setup of automated monitoring equipment, collection and analysis of environmental data including collecting water samples via automated sampling equipment and grab samples, and analysis of those samples at a certified lab. The USGS Wisconsin Water Science Center has an existing surface water quality assurance plan (Garn, 2007). All proposed cooperative monitoring activities with the USGS will follow the Garn, 2007 plan. We will develop appropriate quality system documentation for field runoff monitoring work conducted by UWGB and Outagamie County which will include submitting a Quality Assurance Project Plan (QAPP) within 90 days of the start of this project. The University of Wisconsin – Green Bay has developed or assisted in the development of QAPP's for EPA funding projects including: 1) Upper Fox-Wolf Basins TMDL and Implementation Plan Project, QAPP prepared by The Cadmus Group, Inc. USEPA Contract Number GS-10F-0105J (2013); 2) Integrated Watershed Approach Demonstration Project for the Green Bay AOC/Lower Fox River Watershed, Phases 1 and 2, and Phase 3, The Lower Fox River and Green Bay TMDL, QAPP prepared by The Cadmus Group, Inc.; USEPA Contract Number 68-C-02-109; and 3) Analysis of phosphorus and TSS in Duck Creek, EPA Grant Funding Source: WDNR Grant Sub-award Grant #:00E00712-10-2011.

**c. Environmental and Regulatory compliance**

We do not anticipate the need for any permits or approvals for the project other than WDNR Chapter 30 permits as needed for certain streambank protection practices. We do not anticipate the need to: a) meet any requirements under the Clean Water Act and/or b) conduct any procedures under section 106 of the National Historic Preservation Act (NHPA) and/or section 7(a)(2) of the Endangered Species Act (ESA).

**d. Implementing Watershed-based plans consistent with EPA's Nine Elements Plan**

Representatives from Outagamie County Land Conservation Department (LCD), Brown County LCD, Calumet County LCD, Winnebago County LCD, the Oneida Tribe of Wisconsin, the Natural Resource Conservation Service, Wisconsin's Department of Agriculture, Trade and Consumer Protection, WDNR and Fox-Wolf Watershed Alliance (FWWA) have been working to develop a strategic watershed implementation plan for over eighteen months. As a watershed partnership this team has agreed to continue to offer services throughout the watershed to land owners and producers as they have always done to improve water quality but also work together to strategically implement the needed practices on the landscape to meet TMDL requirements. They will work as a unit, sub-watershed by sub-watersheds to assess and then implement needed land conservation, targeting the highest loading sub-watersheds first.

In 2014, implementation of that agreement began. Outagamie County, working on behalf of the above mentioned partners, conducted a thorough assessment of the Plum and Kankapot sub-watersheds (the highest phosphorus and sediment loading per acre of agricultural land watersheds to the Lower Fox River) to determine what land conservation practices were needed. A Nine Key Element Plan is currently being written for the Plum and Kankapot sub-watersheds. This plan will be submitted to the EPA by November of 2014.

**e. Project Tasks, Roles, Outputs and Outcomes**

***Task 1***: *Land Conservation – Sediment reduction*

This project will reduce the amount of sediment and phosphorus entering the Lower Fox River by installing the identified, needed conservation practices that extend beyond traditional NRCS funded practices in the West Plum Creek and the Kankapot Creek sub-watersheds. These practices include stream buffering up to 50', streambank protection, concentrated flow area seeding, cover crops and ½ to 1 acre treatment wetlands around drain tile outlets. These practices will be designed and implemented by Outagamie County, Brown County and Nature Conservancy staff to protect the waters from soil loss during major storm events and during the critical time periods when fields are

typically left uncovered. These practices are anticipated to result in 6,498 tons of sediment reduction annually by the end of the project period (see table 1).

| | Anticipated Reduction per project year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Year 1 | | Year 2 | | Year 3 | | Year 4 | | Year 5 | |
| Practice | TSS tns/yr | TP lbs/yr | TSS tns/yr | TP lbs/yr | TSS tns/yr | TP lbs/yr | TSS tns/yr | TP lbs/yr | TSS tns/yr | TP lbs/yr |
| Buffer Strips | 22 | 109 | 67 | 328 | 156 | 764 | 200 | 983 | 223 | 1,092 |
| Streambank Protection | 303 | 158 | 908 | 475 | 2,118 | 1,108 | 2,723 | 1,425 | 3,025 | 1,583 |
| Concentrated Flow Treatment | 162 | 138 | 487 | 414 | 1,136 | 965 | 1,461 | 1,241 | 1,623 | 1,379 |
| Cover Crop | 78 | 277 | 235 | 830 | 549 | 1,937 | 706 | 2,490 | 784 | 2,767 |
| Manure Injector | 75 | 111 | 226 | 332 | 528 | 776 | 679 | 997 | 754 | 1,108 |
| Treatment Wetlands | 0 | 0 | 0 | 0 | 44 | 132 | 89 | 264 | 89 | 264 |
| Total Anticipated Reduction | 641 | 793 | 1,923 | 2,379 | 4,531 | 5,682 | 5,857 | 7,400 | 6,498 | 8,193 |

Table 1. Cumulative reductions of anticipated TSS and TP reductions by year per practice for the project period.

Outagamie County will also work with staff and a consultant to develop a mobile GIS app that will give producers the ability to access information the county has about their land as well as weather data. This app can be used as a tool to guide manure application and cropping practices. The app will use the WI Manure Management Advisory System developed by the Department of Agriculture, Trade and Consumer Protection (http://www.manureadvisorysystem.wi.gov/app/runoffrisk). This tool may also have potential to be used as a self-reporting tool for producers entering into water quality trading contracts.

***Task 2***: Water Quality Trading
This project will advance Water Quality Trading by developing the infrastructure within the Fox-Wolf Watershed Alliance to facilitate trading in the watershed and build off the recommendations that will come from the Fox P-Trade project currently being led by the Great Lakes Commission. FWWA will provide outreach to point sources, work with County Land and Water Departments to determine credits generated from practices installed through this project and other funding and broker trades in the watershed. FWWA will work with the Great Lakes Commissions (GLC) and Wisconsin DNR to determine trade ratios for innovative practices. Development of a successful trading program is anticipated to result in bringing additional long term funding for land conservation to the watershed and will also lead to ensuring permanency of land conservation practices thus improving water quality.

***Task 3***: Monitoring
Staff from the UW – Green Bay (UWGB) Department of Natural and Applied Sciences in cooperation with the US Geological Survey Wisconsin Water Science Center, will conduct water quality monitoring activities and related data analyses associated with targeted sediment reduction strategies in Plum and Kankapot Creek sub-watersheds. The focus of this work includes:

1) Cooperative operation of two existing automated stream monitoring stations on Plum Creek
2) Cooperative operation of two inlet-outlet water quality monitoring systems on planned agricultural sediment treatment wetlands
3) Develop quality system documentation pursuant to RFA Section VI.C
4) Procurement, installation and cooperative operation of two targeted runoff monitoring stations
5) Water quality data analysis associated with evaluating the effectiveness of treatment areas



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6) The monitoring efforts will be used to supportoutreach activities related to the potential effects of treatment wetlands and watershed-wide practices on reducing soil erosion and phosphorus runoff at various scales

7) Monitoring methods, results and conclusions will be documented in a final report and shared via presentations at local, state and regional events.

A comprehensive monitoring program will provide the data needed to continue to move agriculture TMDL implementation forward in the watershed.

***Task 4***: Outreach

Outreach will also be a large component of our project. The Fox-Wolf Watershed Alliance will provide outreach to local stakeholders in the Lower Fox River Watershed as well as the entire Fox-Wolf Basin through our Annual Watershed Conference and through participation in TMDL implementation meetings. The Great Lakes Commission will facilitate outreach throughout the Great Lakes Region by tracking the project throughout its entirety, convening regional stakeholders, particularly the winning grantees and key partners within the Lower Fox, Saginaw and Maumee at the beginning and the end of the project to allow for networking, and sharing of challenges, successes and lessons learned. GLC will also host a regional webinar midway through the project.

***Permanency of projects:***

Outagamie and Brown County staff will record all installed practices in a GIS database and be responsible for annual monitoring to ensure each practice remains in place and functions as intended for the life of the practice.

For any structural practices, funded through this or other mechanisms the original cost-share agreement will be recorded with the deed of the parcel on which the practice is installed. This assures that operation and maintenance requirements stay with the project regardless of ownership for the life of the practice.

For non-structural practices such as conservation tillage, cover cropping, or concentrated flow area treatment, a more robust inspection schedule will be required to assure that practices are installed as contracted annually. This is where water quality trading will also play a major role within the project area. As Point Sources sign contracts with landowners to purchase credits for reductions being achieved through the project, more prolonged "permanency" will be achieved via trading contracts between point and non-point sources.

**2. Results: Outputs and Outcomes:**

| Project Tasks | Outputs | Outcomes |
|---|---|---|
| ***Task1*** **Land Conservation**<br><br>Implemented by:<br><br>Outagamie County<br><br>Brown County<br><br>The Nature Conservancy | • 35' Stream Buffering on 216 acres and 50' Stream Buffering on 60 acres reducing 222.5 tons of sediment and 1092 lbs of phosphorus annually<br>• Streambank Protection (riprap) on 55,012 feet reducing 3025 tons of sediment and 1583.9 lbs of phosphorus annually<br>• Concentrated Flow Area Treatment on 506,318 feet | • Stakeholder understanding of Land Conservation expectations throughout the Plum/Kankapot watersheds<br>• Practices Installed will lead to decreased sediment and nutrient loading to the Plum and Kankapot sub-watersheds, the Lower Fox River and ultimately the Bay of Green Bay will result in improved water quality and increased wildlife habitat<br><br>Recommendations for others in the |



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| | | |
|---|---|---|
| | reducing 1623.4 tons of sediment and 1379 lbs of phosphorus annually<br>• Cover Crops (calculated for fields w/ a 3% or greater avg. slope) on 6,802 acres reducing 784 tons of sediment and 2767 lbs of phosphorus annually<br>• Vertical Manure Injector used to apply manure on 2860 acres reducing 754 tons of sediment and 1108 lbs of phosphorus annually<br>• 6 - ½ to1 acre Treatment Wetlands capturing 14.8 tons of sediment and 43.6 lbs of phosphorus per wetland<br><br>• GIS database of practices installed<br><br>• Mobile application for producers | watershed and throughout the region on:<br>• The use of alternate manure injection technology to ensure cover crops are able to be maintained especially during extended growing seasons.<br>• The use of ½ acre treatment wetlands to manage phosphorus from tile drain outlets and sediment from small drainage areas.<br><br>GIS record of practices<br>• Allows for technicians in the field to easier verify and monitor practices for the life of the practice.<br>• Database will allow for reports to alert staff prior to a BMP expiring, allowing technicians to work with landowners to revitalize the BMP instead of having to pay to reinstall the practice.<br><br>Mobile application<br>• Easy access to producers to conservation information may result in practice change |
| Measurements: | • Number of Contracts signed with eligible landowners<br>• Number of practices input in the GIS database<br>• Water quality data comparing baseline and post-BMP installation<br>• Number of mobile application downloads | |
| ***Task 2***<br>**Water Quality Trading (WQT)**<br><br>Implemented by:<br><br>Fox-Wolf Watershed Alliance<br><br>Great Lakes Commission | • Training for FWWA staff<br>• Technology infrastructure necessary to support trading on the FWWA website.<br>• Meetings with DNR<br>• Trade Ratios for innovative practices (Output from WDNR)<br>• Outreach Materials for Point Sources<br>• Assessment of practices for potential credit generation<br>• Facilitate Trades, track credits | • Increased knowledge, ability to properly generate tradeable credits using the WDNR trade ratios<br>• Developed program brings confidence to point sources in the watershed to utilize trading as a compliance option<br>• Successful trades bring additional funding for land conservation to the watershed aiding in the ability to ensure permanency of land conservation practices. |
| Measurements: | • Number of farmers or "sellers" in the project area that have analyzed their farm and farming practices (e.g., via SnapPlus and other WI DNR-approved models) to determine their potential to generate tradable water quality credits<br>• Number of farmers or "sellers" in the project area that have analyzed the costs of generating tradable water quality credits<br>• Number of trading partners, either "sellers" (e.g., farmers) or "buyers" (e.g., point source permitees) in the project area that have engaged in ongoing communications and information sharing with members of the project team to | |



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| | | |
|---|---|---|
| | inform a brokered water quality trading agreement<br>• Number of point sources in the project area that have submitted a "Notice of Intent" to trade as required by WI DNR per the agency's guidance<br>• Number of potential trades where specific traders [(buyer and seller(s)] have been identified within the project area, for which for which specific trade eligibility has been determined per WI DNR guidance<br>  • Number of water quality trade contracts drafted for specific trade partners in the project area<br>  • Number of potential trading partners engaged in negotiations to pursue brokered trades (but where an actual contract has not yet been signed)<br>  • Number of trade contracts signed | |
| ***Task 3***<br>**Monitoring**<br><br>Implemented by:<br><br>University of Wisconsin Green Bay | • Monitoring data comparing baseline data with post BMP implementation data to determine effectiveness on both a watershed basis as well as some individual single site monitoring data for specific practices. | • Ability to link water quality data with land conservation practices on a watershed scale.<br><br>• Ability to make strategic decisions based on lessons learned from water quality data. |
| Measurements: | • Monitoring Data | |
| ***Task 4***<br>**Outreach**<br><br>Implemented by:<br><br>Fox-Wolf Watershed Alliance<br><br>Great Lakes Commission<br><br>and all other project partners | • Local Outreach<br>  o Annual Updates at the Fox-Wolf Watershed Alliance Watershed Conference<br>  o Participate in Lower Fox and Upper Fox/Wolf TMDL Implementation teams to provide updates monthly<br>• Regional Outreach<br>  o Regional Workshops – held in year 1 and year 5 of the project.<br>  o Regional webinar held in year 3 of the project | • Understanding among stakeholders locally and throughout the region of progress, hurdles and success of project.<br><br>• Transferring lessons learned throughout region gives others the ability to utilize the tools that were successful and avoid duplication of project pitfalls. |
| Measurements: | • Number of participants at conferences/workshops/webinars<br>• Monitor the benefit of regional outreach by post workshop/webinar surveys | |

**3. Collaboration and Plans:**
The extent to which this project is successful depends entirely on community support, landowner participation, competent and committed staff, sufficient funding and an integration of various programs. The framework of a successful project involves collaborative contributions from all project partners identified below, divided by project task.

See Other Attachment Form "Support Letters" for letters of support of our collaborating partners.

***Task 1: Land Conservation***
Many of our partners will play a vital role in conveying project progress and outputs to watershed



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landowners about the project and assist in building awareness about the benefits of reducing sediment and nutrient loading.

- Outagamie County Land Conservation Department – The Outagamie County Land Conservation Department will be the primary Best Management Practices (BMP) implementing agency for the project. The LCD will hire project specific staff who, along with existing seasoned staff, will work one-on-one with watershed landowners and operators to design, contract, and install BMPs to achieve the greatest reduction of sediment and nutrient delivery possible for the project area. Funding for practices will be assigned separately for each site utilizing multiple sources including, EQIP, TRM, and SWRM funding in addition to this grant. While project staff will be hired and housed by Outagamie County, they will work project wide with adjoining County conservation staff to implement the goals of the project, regardless of political boundaries.

  Outagamie County has been awarded a large-scale Targeted Runoff Management (TRM) grant from the Department of Natural Resources for the Plum/Kankapot watershed for 2015-2018, totaling $999,906. Funding from the TRM program will be used to install necessary practices that complement the practices identified in this proposal. Through on the ground assessment of the watershed, county staff identified significan stream bank erosion that was not accounted for during TMDL development. If successful with this proposal, project partners anticipate exceeding the TSS reductions identified in the TMDL!

- Brown County Land & Water Conservation Department – A portion of the Plum/Kankapot Watershed crosses into adjacent Brown County. Several landowners in this area will have land in both Brown and Outagamie Counties. Project staff will work with Outagamie County staff to ensure a coordinated approach when providing technical assistance to landowners within the project area.

- The Nature Conservancy – TNC is a non-profit organization that has been working in Wisconsin for over 50 years to conserve the lands and waters on which all life depends. TNC has worked collaboratively in the Green Bay watershed for over a decade to improve the health of Green Bay. TNC will work with partners to test the ability of using natural infrastructure (wetlands) to improve water quality. TNC will provide science input and facilitation of the treatment wetland portion of this project, working with County staff on wetland restoration site selection and design, with University of Wisconsin – Green Bay on the monitoring protocol, and with all partners on disseminating lessons learned. TNC will also conduct basic wildlife surveys to evaluate the wildlife use of the treatment wetlands compared to reference sites.

- Citizens of the Plum & Kankapot Creeks Watershed – The most important partner in the team, their collaboration will play a vital role in the success of implementing the project. The ultimate success of the program will require their acceptance and cooperation. Historically, the landowners within this watershed have cooperated through other conservation programs, installing hundreds of thousands of dollars in BMP's. The practices offered through this proposed project will directly compliment many of the practices installed within the watershed in order to achieve even greater reduction of pollutants delivered to the Plum and Kankapot Creeks and ultimately to the Lower Fox River and Lower Green Bay AOC.

***Task 2: Water Quality Trading (WQT)*** – WQT is an EPA and WI DNR approved compliance option that allows permit holders under the federal Clean Water Act to comply with their permits through cost-effective measures that involved installing conservation practices across the watershed. A WQT program is being established through the *Fox P Trade* project being led by the Great Lakes Commission in partnership with FWWA and many of the other partners on this proposal. It is imperative to utilize the partnerships that already exist and continue to build new partnerships to ensure a successful program is developed; which this project will achieve..



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- Great Lakes Commission – Since 2013, the Great Lakes Commission has been working in the Lower Fox River Watershed on the *Fox P-Trade* project as part of a Contribution Agreement with by NRCS. Upon completion of that project in December 2016, GLC deliverables include a handbook with specific steps and recommendations on how water quality trading should be conducted in the Lower Fox River Watershed. FWWA has worked with GLC as the local Outreach Coordinator on the project. Building upon this relationship will allow the *Fox P-Trade* project to transform into a fully-functioning water quality trading program in the watershed.
  For this project **GLC will provide:**
  1) **Training: Conduct 3 training sessions for FWWA and other project partners on specific deliverables from the Fox P Trade project**, including:
     - Phosphorus Credit Calculator
     - Water Quality Credit Generation Cost Estimation Tool
     - Lower Fox River Watershed Water Quality Trading Handbook
     - Hands-on presentation and review of contents with step-by-step instructions
     - In-person training on steps and approaches for conducting brokered trades

  2) **Technical Assistance: Coordinate with WI DNR on trade ratios for innovative practices -** Current Wisconsin Department of Natural Resources Guidance on Water Quality Trading includes trade ratios for quantifying tradable credits for only ten (10) agricultural conservation practices and six (6) urban best management practices. Additional practices will be implemented through this GLRI proposal that could generate tradable water quality credits. However, these innovative practices will need to be assessed by DNR and uncertainty factors will need to be developed for these innovative practices so that they credit generation can be quantified. GLC compile relevant information on the innovative practices deployed in this proposal and will work with WI DNR to develop appropriate trade ratios for those practices.

- Wisconsin Department of Natural Resources – WDNR has developed Water Quality Trading Guidance and has been an integral partner in testing that guidance as the Fox P-Trade project moves forward. To achieve the reductions necessary in the Lower Fox River Watershed innovative practices must be utilized on the landscape. DNR will partner with the Great Lakes Commission and the Fox-Wolf Watershed Alliance to develop trade ratios for those practices.
- Point Sources located in the Lower Fox River Watershed – Success of the Water Quality Trading portion of this project will depend on involvement from some of the point sources in the watershed. The FWWA has been building relationships with these point sources for the past 4 years. This project has the potential to increase the reduction of nutrients and sediments loading into the Lower Fox River and do so in a manner that saves permit holders money by matching water quality trading credit buyers and sellers. In some cases this savings to point sources will keep money in the pockets of watershed residents ultimately bettering the economy in the watershed and adding more "permanency" to the cropping practices identified as necessary for success.

***Task 3: Monitoring –***

- University of Wisconsin Green Bay (UWGB)
  ***Plum and West Plum Monitoring*** - The Lower Fox River Watershed Monitoring Program (LFRWMP) at UWGB, along with USGS has been cooperatively monitoring Plum Creek since October 2010 and the West Branch of Plum Creek for the past two years. The value of the existing

automated monitoring infrastructure (equipment and installation) at the two Plum Creek stations is more than $25,000.

For this proposal we will contract with the USGS to continue our cooperative flow, concentration and load monitoring at both of the existing Plum Creek stations for Water Years 2015-2019. The West Plum station will be upgraded to include AC power and online, remote communication capabilities. We plan to analyze 125 event samples/year for TP and TSS from the two sites. Approximately 50 event flow samples will be analyzed for DP each year. Approximately 39 low flow samples will be collected from each site. Samples will be collected weekly May-October and monthly for the remaining months. One-half of the samples will be analyzed for DP in addition to TP and TSS. All samples will be analyzed at the NEW Water (Green Bay Metropolitan Sewerage District, GBMSD) certified lab. All data from the two Plum Creek sites will be stored in the USGS National Water Information System (NWIS) database.

***Agricultural Runoff Treatment Wetland Monitoring*** - This proposal includes flow and water quality sampling for agricultural treatment wetlands to be installed to treat surface and tile flow in small catchments within the Plum Creek watershed. Discharge and water quality will be monitored at inlets and outlets of two treatment wetland watersheds in Plum Creek by the U.S. Geological Survey (USGS). USGS and UWGB staff will assist The Nature Conservancy staff and other project partners in site selection and design of treatment wetlands and monitoring points.

Baseflow and storm event water samples will be collected and analyzed for suspended sediment dissolved phosphorus, and total phosphorus. The water-quality and flow data will be used to compute daily phosphorus and suspended sediment loads and to evaluate treatment effectiveness of the wetlands. Sampling will consist primarily of event-based sampling. Event-based monitoring consists of intensive sampling during periods of increased runoff resulting from precipitation and snowmelt. These periods of extreme variation in concentration and flow are critically important in accurately defining loads. Routine sampling will be conducted by the USGS. Automated samples will be retrieved with assistance from UWGB staff. The USGS will determine which samples should be analyzed to represent the changes in water quality in the surface and tile inflows and wetland outflow. All samples will be analyzed at the GBMSD laboratory.

***Field Catchment Monitoring*** - UWGB will assist the Outagamie County Land Conservation Department in conducting edge-of-field runoff monitoring to compare and demonstrate the effectiveness of targeted sediment and associated nutrient reduction practices (e.g., concentrated flow treatment practices) small, within-field catchments. Photographic documentation of catchment conditions, treatment practices and runoff characteristics will also be conducted and used for outreach and education purposes.

***Task 4: Regional Coordination and Outreach*** –

- Great Lakes Commission – The GLC will conduct 2 regional workshops and two webinars to build a Great Lakes regional network among GLRI-funded projects in Priority Watersheds (Maumee, Saginaw, and Lower Fox). Specific activities are described below.

    1) **Planning and conduct of 1st regional workshop** - This activity will involve convening the winning grantees and their key partners within each of the GLRI priority watersheds: Lower Fox, Saginaw, and Maumee. This objective of this first workshop will be to provide an in-person forum for each of the winning project teams in each of the GLRI priority watersheds to network and share their approaches, metrics, and anticipated challenges. This will enable teams to transfer knowledge, information, and ideas to their respective projects, where appropriate, through adaptive management.

    2) **Planning and conduct of 2 regional webinars** - In years 3 and 4 of the project, each of the priority watershed projects will have adequate experience to share lessons learned. These



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webinars will provide a forum for each of the winning project teams in each of the GLRI priority watersheds to share progress to date, challenges (actual compared to anticipated) and lessons learned thus far. This will enable teams to learn from the other projects and enhance overall basinwide impact in the three priority watersheds.

3) **Planning and conduct of 2nd regional workshop -** This activity will involve convening the winning grantees and their key partners within each of the GLRI priority watersheds: Lower Fox, Saginaw, and Maumee. This objective of this second and final workshop will be to provide a forum for each of the winning project teams in each of the GLRI priority watersheds to network and share their approaches, metrics, and actual challenges and successes. A special session of the workshop will be designed to enable project team members to explore future partnerships that build on lessons learned in future collaborations.

Aside from the relevance of the GLRI Action Plan and the EPA Strategic Plan discussed in previously, this project is consistent with the following plans for protection and restoration of the Lower Fox River and Green Bay AOC:

Lake Michigan Lakewide Management Plan (LaMP), 2008 - Developed by the Lake Michigan Technical Committee with assistance from the Lake Michigan Forum and various other agencies and organizations. www.epa.gov/glnpo/lamp/lm_2008/lm_2008.pdf
A long-term goal of the LaMP to ensure that rivers and streams are adequately buffered to reduce sedimentation and nutrient inflow, ties directly to the focus of this project. Many other priorities of the LaMP are common components of this proposed project, including the protection of large contiguous blocks of forest, grassland and wetland that serve as habitat for mammals, birds, and amphibians and provide a self-sustaining ecosystem for all to enjoy.

Lower Green Bay Remedial Action Plan, 1993 Update for the Lower Fox River and Green Bay AOC, WDNR. http://dnr.wi.gov/org/water/greatlakes/priorities/1993RAPupdate.pdf
The Lower Green Bay RAP is a long-range strategy for restoring water quality to the lower Bay and Fox River ecosystem. Two of the top five high priorities for the RAP are to reduce suspended sediments and phosphorus. Controlling nonpoint sources of total phosphorus and sediment in the Plum and Kankapot sub-watersheds will be critical to addressing these impairments and restoring human recreational use and enjoyment of Lower Fox River Basin. The Lower Green Bay RAP and the LaMP are similar in that they both use an ecosystem approach to assess and remediate environmental degradation of the beneficial use impairments. The RAP, however, encompasses a much smaller geographic area, concentrating more on a single watershed with contaminated sediments.

Total Maximum Daily Load (TMDL) & Watershed Plan for Total Phosphorus and Total Suspended Solids in the Lower Fox River Basin and Lower Green Bay, prepared by the CADMUS Group for WDNR, the Oneida Tribe & the EPA, March 2012.
http://dnr.wi.gov/water/wsSWIMSDocument.ashx?documentSeqNo=62246254
According to the TMDL, the Plum and Kankapot sub-watersheds are the highest sediment and nutrient loading watersheds in the Lower Fox River. Controlling significant sources of total phosphorus and sediment loads in these sub-watersheds will be critical to achieving the Lower Fox River TMDL targets.

Outagamie County Land and Water Resource Management Plan (LWRM) 2010-2015, April 2010, developed by the Outagamie County Local Advisory Workgroup. http://www.co.outagamie.wi.us/landcons/Outagamie%20County%20LWRM%20Plan2010-2015.pdf Controlling significant sources of total phosphorus and sediment loads in the Lower Fox Basin, such as those from the Plum and Kankapot sub-watersheds, will be critical to achieving the following goals and objectives of the LWRM Plan;

- ✓ Protect and enhance the quality of our surface water, groundwater and soils
- ✓ Protect and enhance wetland and upland habitat.

- ✓ Ensure the consistent implementation of the Stormwater Management and Erosion Control Ordinances in Outagamie County
- ✓ Partner with and involve citizens in soil and water conservation initiatives in rural and urban areas.

**3. Community-Based Focus and Environmental Justice Impacts:**

***Community-Based Focus:***

The Fox-Wolf Watershed Alliance has a history of working with government and community-based organizations. The FWWA is an umbrella organization in the watershed, bringing attention to individual organization's efforts in the watershed and coordinating efforts when applicable to more cost effectively protect or restore our shared resources.

For this project, FWWA is coordinating the efforts of Outagamie County, Brown County, The Nature Conservancy, University of Wisconsin Green Bay, the Great Lakes Commission and our own. Sub-awards will be granted to each of the above mentioned entities in order to enhance the project effectiveness and efficiency.

Outagamie County and Brown County have a history of involving citizen input in the development of conservation plans for the Counties. This has been accomplished by assembling citizen's advisory committees from which to garner input from those impacted by the plans and to establish a list of their resource concerns. This process in particular was used by Outagamie County to develop the County Land and Water Resource Management Plan as well as the Duck/Apple/Ashwaubenon Priority Watershed Project. Similarly, citizen involvement was drawn upon in the development of the Lower Fox River TMDL Draft Plan via both targeted groups of farmers and landowners at facilitated meetings, as well as through a random survey of 1000 property owners in the Basin. The common resource concern of all of these groups is the delivery of phosphorus and sediment to the waters of the Counties. Not only were these common concerns, they also topped the list with each group

***Environmental Justice:***

The receiving water body to both the Plum and Kankapot Creeks is the Lower Fox River. Below the outlets of both watersheds lie the communities of Wrightstown, De Pere, and Green Bay. Since settlement and the development of industry in the Lower Fox Valley, this stretch of river has been inundated with discharge of pollutants from many of the point source factories upstream, as well as extensive impact from nonpoint sources due to the boom in development of this thriving industrial area over the last century. Fortunately, the Clean Water Act resulted in tighter regulation of the point sources in the 1970's, and more recently local stormwater and erosion control ordinances have helped to reduce the impacts of development. Unfortunately, the citizens of these downstream communities have been negatively impacted by the reduction of water quality and years of degradation. The aforementioned Acts and Ordinances have made positive strides towards improving the water quality for these communities, yet the agricultural nonpoint runoff is still impacting surface water through sediment and nutrient delivery to the Lower Fox River.

This proposed project will help to address this issue and bring further relief to the downstream communities who have, due to their proximity, been the unwilling recipient of these pollutants for decades.

**4. Programmatic Capability and Past Performance:**

**a/b. Past Performance and History of meeting the reporting requirements**

While our project partners have received past awards, have experience and have been successful completing and managing the assistance agreements, the Fox-Wolf Watershed Alliance does not have

relevant past performance or reporting information for federal awards including GLRI. Our project partners and have committed their support to assist FWWA as needed.
FWWA would be willing to engage the Great Lakes Commission as the fiscal agent for the project should EPA prefer to work with an organization with a long history of federal grant management. (See GLC's performance history below).

**c. Organizational Experience and plan for timely and successfully achieving project objectives:**

***Organizational Experience***

The Fox-Wolf Watershed Alliance is a 501 (C) (3) watershed organization with the resources and expertise required to complete this project. This project will be guided by an advisory board made of FWWA Board members and project partners including members of state and local agencies, multi-state organizations, universities, local government, landowners and environmental organizations., managed by a team of professionals including FWWA Director and FWWA Office Manager and administered by FWWA staff and a team of expert project partners assembled by FWWA to ensure project success.

The Fox-Wolf Watershed Alliance has been working to find cost effective ways to improve water quality in the watershed for over two decades. During that time, our organization has built trusted relationships with local governments, business and industries, non-profits and the general public. The FWWA, was established as the Northeast Wisconsin Waters for Tomorrow (NEWWT) in 1987 by community leaders to determine the most cost-effective actions to meet the goals of the Remedial Action Plan (RAP). Since its inception, FWWA has been an active organization in the watershed.

- In 1989, NEWWT conducted a study in to assess the feasibility of pollutant trading in the Fox-Wolf River Basin. The study determined that a regulatory driver would be necessary for trading to be successful in the watershed.
- In 1993 the Northeast Wisconsin Land Trust (NEWLT) began as a part of FWWA, known at that time as the Fox-Wolf Basin 2000. NEWLT separated from FWWA in 1996 in order to pursue it's own mission of permanently protecting Northeast Wisconsin's special natural places that contribute and sustain our quality of life.
- In 2005, the Northeast Wisconsin Stormwater Consortium (NEWSC) was created as a subsidiary of FWWA. NEWSC is a network of communities that equitably share resources to cost effectively address stormwater issues and ultimately achieve behavior change, thereby improving watershed health. NEWSC membership has grown from it's original thirteen members and is currently forty-one municipalities strong.

Seeing the driver for watershed compliance options emerge with the signing of the Lower Fox River Total Maximum Daily Load in May of 2012, the Fox-Wolf Watershed Alliance set its sights back on cost effective solutions to improving watershed health. In 2013, FWWA conducted a Feasibility Study on Wisconsin's Adaptive Management Option on behalf of five of the point sources in the Lower Fox River Watershed and in 2014 FWWA staff joined the Great Lakes Commission's Fox P-Trade Project as the regional outreach coordinator.

FWWA staff currently sits on the Brown County Phosphorus Committee, the Winnebago Waterways Project Steering Committee, the Lower Fox River TMDL Agriculture, Outreach, MS4 and Monitoring Committees, the Silver Creek Adaptive Management Advisory Committee, and is involved with point sources in the watershed through regional Chambers of Commerce, and the Lower Fox River Dischargers Association. Partnerships within the watershed have been made, a regulatory driver now exists that will engage point sources in watershed compliance options, now we need to get the ball rolling by installing practices in the watershed that reduce TSS and phosphorus and generate credits.

***Plan for timely and successfully achieving project objectives***

To ensure project success and timely completion of this project, FWWA has called upon a number of partners in the watershed to share their expertise to carry out the project. FWWA Director will have



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monthly check-ins with project partners and hold quarterly project meetings with the project advisory board and project partners.

**d. Staff Expertise/Qualifications (Staff expertise or the ability to obtain them)**

See Item 8. Other Attachments Form – Resumes or Curriculum vitae of Principal Investigators and Critical Staff for more specific staff experience information

**Fox-Wolf Watershed** staff have experience in project management, grant tracking, partnership building and watershed outreach and education. A qualified Web Designer with a Geographic Information Systems Management Specialty will be hired in a timely manner to work on this project. The project advisory committee made of Fox-Wolf Board Members, watershed stakeholders and Wisconsin DNR staff has over 100 years of experience working in the watershed with extensive experience in agricultural land conservation, wetlands mitigation, land protection and restoration, conservation planning, and water quality data collection.

The Fox-Wolf Watershed Alliance has extensive history working collaboratively with the other project partners as well as many others in the watershed and throughout the region. The history of successful cooperative projects among the key conservation partners (Outagamie County, Brown County, The Nature Conservancy, Great Lakes Commission, WDNR, and University of Wisconsin) is evidence of their collaborative intent and experience. Partner expertise includes sediment and nutrient management through land conservation, education and outreach with agricultural stakeholders, wetland mitigation, protections and restoration, freshwater conservation and restoration, water quality and biologic monitoring.

**Outagamie County LCD** has been working on installing land conservation through a variety of state and federal cost share programs since the mid 1980's. The plan for timely completion of this project will be to focus on contacts with landowners of critical sites within the watershed. A good working relationship has already been established with many of the landowners in the watershed through earlier programs. Accomplishments of previous grant funded projects and the many other programs implemented by the Outagamie County LCD would not be possible without a highly trained and qualified staff. The staff of nine employees collectively has over 111 years of Conservation Program experience, which is invaluable when dealing with complex programs and getting conservation implemented at the local level.

**Brown County LCD** has been working on installing land conservation practice BMP's through a variety of state and federal cost share programs since the 1980. Brown County utilizes a one-on-one contact strategy with landowners to inventory, and assess conservation needs of each individual farm. A good working relationship has already been established with many of the landowners in the watershed through earlier programs. We have also worked diligently to maintain a cooperative relationship with NRCS in coordinating conservation effort and associated dollars county wide.
Brown County currently has a staff of 11 employees (including 3 engineers and 3 agronomists) with collective Conservation Program experience totaling over 147 years which is invaluable when dealing with complex programs and getting conservation implemented at the local level.

**The Nature Conservancy** staff involved with this proposal have over 40 years of proven project, business and conservation management experience. TNC staff involved have extensive conservation experience in partnership building, wetland planning, wetland mitigation, scientific design, agricultural watershed projects, and grant management. Much of this experience has occurred with a Great Lakes watershed focus. In addition, our Wisconsin team works in concert with other TNC scientists with additional expertise in treatment wetland design and monitoring and water fund projects. Access to this knowledge provides additional project resources. Resumes and/or curricula vitae are available upon request.



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**The Great Lakes Commission** (GLC) has a 50-plus year history of leading and assisting with projects to improve water quality and other ecological conditions in the Great Lakes basin through reductions in non-point sources of pollution.

- For more than two decades, our organization has convened the regional Great Lakes Soil Erosion and Sedimentation Task Force to protect and improve water quality in the Great Lakes through financial incentives, information and education, and professional assistance.
- For almost a decade we have been advising and promoting the development of new models for assessing sediment loads from Great Lakes tributaries;
- We have recently initiated a Demonstration Farms project in the Lower Fox River Watershed. Under a Contribution Agreement with NRCS, GLC is working with state and county agencies to identify specific farms where the accelerated installation of innovative conservation practices can demonstrate measurable water quality improvements
- Beginning in 2013 and also under a Contribution Agreement with NRCS, GLC is developing a water quality trading program in the Lower Fox River watershed (*Fox P Trade*) whereby agricultural conservation practices are installed beyond state standards so as to further improve water quality and provide farmers with a long-term non-public source of funding to install and maintain conservation practices. The capacity and lessons learned from Fox P Trade will be directly applied to the work proposed in this project.

The GLC has a history of successful performance as both a federal assistance and grant recipient and manager. The GLC's legal standing as an interstate compact agency, including tax exempt and nonprofit status, makes it eligible to receive grants, contracts and donations from any public or private sector source. In its last fiscal year (2013), the GLC was awarded and managed approximately 65 federal and non-federal grants and contracts totaling over $6.6 million, ranging in size from $5,000 to over $10 million.

**5. Education/Outreach.**

Project progress and results will be disseminated locally and throughout the Great Lakes Region.

FWWA will be responsible for local outreach. FWWA has a history of education and outreach in the Fox-Wolf Basin, project results will be shared at the annual Fox-Wolf Watershed Conference and monthly at TMDL implementation team meetings. This local outreach will allow for the successes of the Plum Kankapot Land Conservation and the trading that occurs as a result of this project to be replicated throughout the Lower Fox River Watershed and the Fox-Wolf Basin.

GLC will conduct regional webinars in the first year, third year and at the completion of the project. These webinars will convene the winning grantees and their key partners within the Lower Fox, Saginaw and Maumee to share their project challenges, progress, successes and lessons learned with each other and stakeholders throughout the Great Lakes Basin.

UW – Green Bay and USGS will contribute to outreach efforts of the project team. Fermanich and other members of the monitoring team will present regular updates at basin stakeholder meetings and conferences. All cooperative USGS water-quality data and computed loads will be published in annual USGS data reports and stored in the National Water Information System data base (http://waterdata.usgs.gov/nwis). One or two final technical reports summarizing the monitoring results will be jointly authored by the project team.

**c. DETAILED BUDGET NARRATIVE:**

**Budget Table**

| Note: Costs are for a 5-Year Project | EPA Funding | Leverage |
|---|---|---|
| **Personnel** | | |
| Director @ $33.89/hr x 1,560 hrs/year x 5 years | $264,342 | |
| Office Manager @ $19.91/ hr x 520 hrs/year x 5 years | $69,966 | |
| Computer/GIS $26.91/hr x 1040 hrs/year x 5 years | $139,932 | |
| **TOTAL PERSONNEL** | **$382,092** | |
| **Travel** | | |
| Operating costs (staff provided vehicle): Estimated at 1,200 miles @ $0.55 per mile = $660 per year x 5 years | $3,300 | |
| **TOTAL TRAVEL** | **$3,300** | |
| **Supplies** | | |
| Outreach materials | $2,500 | |
| Office space and utilities ($1,800 per year x 5 years) | | |
| **TOTAL SUPPLIES** | **$2,500** | |
| **Contractual** | | |
| Lawyer Consultation and Services | $200,000 | |
| **TOTAL CONTRACTUAL** | **$200,000** | |
| **Other** | | |
| **Subawards – See Subawards detailed budgets below** | | |
| Outagamie County | $2,370,002 | $1,047,704 |
| Brown County | $272,629 | |
| The Nature Conservancy | $61,228 | |
| University of Wisconsin – Green Bay | $688,800 | $90,093 |
| Great Lakes Commission | $103,522 | |
| Wisconsin Department of Natural Resources | $20,000 | |
| **TOTAL OTHER** | **$3,516,181** | |
| **TOTAL FUNDING** | **$4,196,221** | **$1,137,797** |
| **TOTAL PROJECT COST (All Funding)** | **$5,334,018** | |

**Budget Narrative**

The Fox-Wolf Watershed Alliance looks forward to advancing agricultural TMDL implementation in the watershed and building the capacity to facilitate water quality trading in the Fox River Basin. To complete the tasks identified in the proposal FWWA is requesting funding through GLRI for:

- Personnel – FWWA staff will spend 3120 hours over 5 years to administer the grant, manage the project, build the capacity within our organization to facilitate water quality trading and facilitate trades.
- Travel – Mileage reimbursement for staff to travel to meetings throughout the watershed
- Supplies - Funds to develop outreach materials for the project and for water quality trading
- Contractual – FWWA will contract with a lawyer to review documents and processes as well as determine liability related to brokering water quality trading
- Other – To ensure project success and timeliness, subawards will be provided to project partners. Project partners have provided detailed budget tables for their subawards below.
    - Outagamie County will be providing voluntary cost share. A large portion of this cost share is from a large-scale Targeted Runoff Management (TRM) grant the county has been awarded from the WI Department of Natural Resources for the Plum/Kankapot watershed for 2015-2018. The county will also supply voluntary cost share for project staff and supplies involved with developing the mobile application.



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- The University of Wisconsin Green Bay is providing voluntary cost share through a cost match program with USGS.

***Sub-Award Detailed Budgets – Note - Costs are for 5 year project***

| Outagamie County | Sub-award | Leverage |
|---|---|---|
| **Personnel** | | |
| Project Tech II @ $38,947/year (40hrs/wk) x 5 years | $194,735 | |
| Project Agronomist @ $38,947/year (40hrs/wk) x 5 years | $194,735 | |
| Project Tech II @ $38,947/year (2.5 hrs/wk) x 5 years | | $12,171 |
| GIS Specialist/Systems Administrator @ $25.83hr (80 hrs for implementation, 40 hours for annual updates) | | $6,199 |
| **TOTAL PERSONNEL** | **$389,470** | **$18,370** |
| **Fringe Benefits** | | |
| 40% of Salary and Wages (FICA, Retirement & Health Benefits) | $155,788 | $7,348 |
| **TOTAL FRINGE BENEFITS** | **$155,788** | **$7,348** |
| **Travel** | | |
| Fuel costs for Project Staff (2 vehicles): Estimated at 4,800 miles per year x 2 vehicles = $2,400 per year x 5 years | $12,000 | |
| Operating costs (1 County provided vehicles): Estimated at 4,800 miles x 1 vehicles @ $0.17 per mile = $1,632 per year x 3 years | | $4,080 |
| Vehicle Lease: $5,000 per year x 5 years | $25,000 | |
| **TOTAL TRAVEL** | **$37,000** | **$4,080** |
| **Supplies** | | |
| Outreach materials/Brochures/Meeting expenses | $10,000 | |
| Office space, phone and utilities (Provided by County Tax Levy) (100 sq. ft. x $16 per sq. ft. = $1,600 per year x 5 years) | | $8,000 |
| ESRI Mapping Software Suite @ $60,000/yr (5% dedicated to project) | | $5,000 |
| ArcGIS Online @ $200/account/year (5 accounts needed)x5 years | | $5,000 |
| **TOTAL SUPPLIES** | **$10,000** | **$18,000** |
| **Equipment** | | |
| 2 - Vertical Till Injectors | $190,000 | |
| **TOTAL EQUIPMENT** | **$190,000** | |
| **Contractual** (BMP Installation) (Leverage provided by TRM grant received by the County) | | |
| 35' Stream Buffering on 76 acres (76 acres @ $3,000/ac) | $228,000 | |
| 50' Stream Buffering in key locations on 58 acres (58 acres @ $3,000/ac) | $ 174,000 | |
| Streambank Protection (riprap) – 47,520 feet | $ 130,500 | |
| Concentrated Flow Area Seeding – 128 acres (128 acres@ $35/acre = $4,480 | $4,480 | |
| Cover Crop – Aerial Application over standing silage corn 847 acres @ $53/acre x 4 years | $179,564 | |
| 6 - ½ acre to 1 acre treatment wetlands | $90,000 | |
| Wisconsin DNR TRM Grant awarded to county to install land conservation practices in the Plum & Kankapot Creeks. | | $999,906 |
| Smart phone application developer | $25,000 | |
| **TOTAL CONTRACTUAL** | **$ 831,544** | **$999,906** |
| **Other** | | |



2

| | | |
|---|---|---|
| 35' Stream Buffering One Time Incentive Payment<br>76 acres @ $1,000 per acre | $76,000 | |
| 35' Stream Buffering Annual Incentive Payment<br>76 acres @ $500 per acre x # of years | $114,000 | |
| 50' Stream Buffering One Time Incentive Payment<br>58 acres @ $3,000 per acre | $87,000 | |
| 50' Stream Buffering Annual Incentive Payment<br>58 acres @ $750 per acre x # of years | $130,500 | |
| Concentrated Flow Area Seeding Annual Incentive Payment<br>128 acres @ $100/ac x 5 | $64,000 | |
| Cover Crop – Aerial Application over standing silage corn –<br>Annual Incentive Payment 847 acres @ $25/acre x 4 years | $84,700 | |
| Air Strip Enhancement | $200,000 | |
| **TOTAL OTHER** | **$756,200** | |
| **TOTAL FUNDING** | **$2,370,002** | **$1,047,706** |

| **Brown County** | **Sub-award** | **Leverage** |
|---|---|---|
| **Personnel** | | |
| Project Tech II @ $38,947/year (40hrs/wk) x 5 years | $194,735 | |
| **TOTAL PERSONNEL** | **$194,735** | |
| **Fringe Benefits** | | |
| 40% of Salary and Wages (FICA, Retirement & Health Benefits) | $77,894 | |
| **TOTAL FRINGE BENEFITS** | **$77,894** | |
| **TOTAL FUNDING** | **$272,629** | |

| **Great Lakes Commission** | **Sub-award** | **Leverage** |
|---|---|---|
| **Personnel** | | |
| (1) GLC Personnel | $46,684 | |
| **TOTAL PERSONNEL** | **$46,684** | |
| **Fringe Benefits** | | |
| 45% of Salary and Wages (Description of Fringe) | $21,008 | |
| **TOTAL FRINGE BENEFITS** | **$21,008** | |
| **Travel** | | |
| 2 out of state trips for Regional Workshops $1200 per trip | $2,400 | |
| 3 out of state trips for training of FWWA staff $1200 per trip | $3,600 | |
| **TOTAL TRAVEL** | **$6,000** | |
| **Supplies** | $300 | |
| **TOTAL SUPPLIES** | **$300** | |
| **Other** | | |
| Phone (including webinar services) | $500 | |
| Press Releases | $200 | |
| **TOTAL OTHER** | **$700** | |
| **Total Direct Costs** | **$74,692** | |
| **Indirect Costs** (42.59% of salary and fringe costs) | **$28,830** | |
| **TOTAL FUNDING** | **$103,522** | |

| **The Nature Conservancy** | **Sub-award** | **Leverage** |
|---|---|---|
| **Personnel** | | |



2

| | | |
|---|---|---|
| Green Bay Project Director | $20,150 | |
| Dir Science or Conservation Ecologist | $9,350 | |
| **TOTAL PERSONNEL** | **$29,500** | |
| **Fringe Benefits** 40% of salary | $12,390 | |
| **TOTAL FRINGE BENEFITS** | **$12,390** | |
| **Travel** | $3,500 | |
| **TOTAL TRAVEL** | **$3,500** | |
| **Supplies** – outreach/communication fact sheet | $4,600 | |
| **TOTAL SUPPLIES** | **$4,600** | |
| INDIRECT COSTS 22.48% of salary+fringe | $11,238 | |
| **TOTAL FUNDING** | **$61,228** | |

| **University of Wisconsin Green Bay (UWGB)** | **Sub-award** | **Leverage** |
|---|---|---|
| **Personnel** | | |
| Project Director (fixed;summer) | $11,000 | |
| Co-PI Watershed Analyst (Acad. Staff 10% yrs 1&2; 20% yrs 3-5) | $35,585 | |
| Grad Student (hourly; $15.00/hr; 50 hrs yr 1; 100 hrs yr 2, 400 hrs yrs 3-5) | $20,250 | |
| Students (hourly; $12.50/hr, 120 hrs yr1; 150 hrs yr2; 200 hrs yrs 3-5) | $10,875 | |
| **TOTAL PERSONNEL** | **$80,710** | |
| **Fringe Benefits** | | |
| Faculty 52% increase per year = 1% | $5,945 | |
| Academic Staff increase per year = 1% | $20,994 | |
| Grad Student 3.5%, increase to 4% years 4 & 5 | $769 | |
| Undergraduates 3.5%, increase to 4% years 4 & 5 | $406 | |
| **TOTAL FRINGE BENEFITS** | **$28,114** | |
| **Travel** | | |
| Project (field work, local meetings) | $8,252 | |
| **TOTAL TRAVEL** | **$8,252** | |
| **Supplies** | | |
| General (lab, bottles, chemicals, field, ect.) | $7,000 | |
| Turbidity probe, loggers, auto samplers, flumes (2 sets) | $22,000 | |
| Poster printing | $250 | |
| **TOTAL SUPPLIES** | **$29,250** | |
| **Other Direct Costs** | | |
| USGS Subcontract (Plum and W. Plum; Yr 1 inc. equipment) | $95,375 | $23,843 |
| USGS Subcontract (treatment wetlands; Yr 2 inc. eqpmt, yr 5 inc reporting) | $265,000 | $66,250 |
| Analytical Lab costs Plum stations ($11,700 base; 1% inc for Years 4&5) | $46,917 | |
| Analytical Lab costs 2 edge-of-field sites (24 samples/site * 2 * $43.50) | $8,352 | |
| Analytical Lab costs treatment wetlands (80*3 pts*2 wetlands=480 tot; 1/2 w/DP) | $42,450 | |
| Other (equip. repair, printing, copying, etc..) | $1,687 | |
| **TOTAL OTHER DIRECT COSTS** | **$490,784** | |
| **Total Direct Costs** | **$637,109** | |
| **Total Indirect Costs** (47.5% of Salaries and Fringe Benefits) | **$38,260** | |
| **TOTAL FUNDING** | **$688,800** | **$90,093** |

**Expeditious Spending and Sufficient Progress in the use of GLRI Funds:** Project team will check in with project manager monthly to discuss progress to date and upcoming plans. The Fox-Wolf Watershed Alliance will call on additional partners as needed to ensure timely success of the project.



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**BROWN COUNTY**
**POSITION DESCRIPTION**

**POSITION TITLE:** AGRONOMIST TECHNICIAN

**REPORTS TO:** COUNTY CONSERVATIONIST

**DEPARTMENT:** LAND AND WATER CONSERVATION

## JOB SUMMARY

Provides technical assistance to county landowners related to the adaptation and enforcement of conservation tillage, nutrient management practices, and integrated pest management practices along with implementation of federal, state and county standards and ordinances.

## ESSENTIAL DUTIES

Develop programs to provide information, education, and technical assistance to landowners regarding the use of conservation tillage systems and nutrient management practices to ensure compliance with State Ag Performance Standards and local ordinances.

Conduct on-site visits with landowners to determine current compliance status with all applicable County, State and Federal ordinances or standards and provides the necessary technical assistance and guidance to help landowners achieve compliance.

Maintains accurate data on crop field tillage, rotations and residue management results and reviews them with the landowner/operators.

Determine landowner eligibility for the Working Lands Initiative Program based on present cropland management and current soil erosion prediction model calculations using SNAP-Plus and RUSLE2.

Work with landowners to develop conservation plans that maintain compliance with the Working Lands Initiative Program requirements and state and county standards and ordinances.

Annually review nutrient management plans submitted by landowners to ensure compliance with state and local programs and ordinances, specifically NRCS Code 590.

Ensure landowners are provided sufficient and accurate information and technical support to correctly implement nutrient management, and other soil and water conservation practices to ensure compliance with applicable State Ag-Performance Standards and county ordinances.

Develop winter spreading plans.

Develop cost-share agreements with landowners for nutrient management planning. Ensures financial and administrative procedures are completed; maintains costs of agreements, amendments, cost share calculations, funding/grant proposals, project and cost certifications.

Ensure that working relationships are well maintained with all landowners, agencies, and governmental units.

## NON-ESSENTIAL DUTIES

Performs related functions as assigned.

## MATERIALS AND EQUIPMENT USED

Computer – MS Office, ArcView
Vehicle
General Office Equipment

## MINIMUM QUALIFICATIONS REQUIRED:

### Education and Experience:

B.S. or Associate Degree in Agronomy, Natural Resource Management, Soil Science, Watershed Management or a related field of study or a combination of training and direct experience.

5 years WI Certified Crop Advisor (CCA) experience, or equivalent, in an Agronomy related position with knowledge of conservation tillage, residue management, nutrient management, and current farming practices.

WI Agronomic certification or equivalent

RUSLE2 and SNAP-Plus computer model experience required.

ArcGIS experience preferred.

### Licenses and Certifications:

Valid Driver's License
WI Agronomic certification (CCA, ARCPACS, or NAICC)
WI Commercial Pesticide Applicator certification (preferred)
USDA-NRCS Conservation Planner certification (preferred)

### Knowledge, Skills, and Abilities:

Thorough knowledge and ability to apply principles of soil erosion control methods, and nutrient management.

Ability to interpret and analyze soil test reports.

Ability to investigate and evaluate animal waste ordinance violations and report finds clearly and concisely to both the department and Corporation Counsel.

Ability to use computers and applicable software including spreadsheet, word processing, RUSLE2, SNAP-Plus and ArcView.

Possess good mathematical skills.

Ability to interpret aerial photography, aerial slides, soils maps, USGS quadrangles, and to use in-field measuring devices.

Knowledge of programs and responsibilities of the County Land and Water Conservation Department; USDA Natural Resource Conservation Service; WI Dept. of Natural Resources; and WI Dept. of Agriculture, Trade and Consumer Protection; US EPA; UW Extension; and non-government organizations.

Ability to understand and apply soil and water resource management planning methods.

Knowledge of Wisconsin State Statues regarding conservation programs administered by the County and other state soil and water programs.

Knowledge of County water and soil standards, DNR and DATCP programs and reporting procedures.

Knowledge of County and township zoning ordinances.

Knowledge of the Brown County Code of Ordinances.

Knowledge of agronomy, animal husbandry/biology, farming practices, nutrient management and soil sciences of the economics of conservation practices.

Ability to analyze data and formulate solutions to erosion and conservation problems.

Ability to prepare and give presentations through training sessions with associations, community groups, schools, governmental entities and professionals regarding nutrient management and conservation practices.

Ability to promote and persuade landowners to use proven conservation ideas.

Ability to apply for grants through both state and federal agencies.

Ability to address hostile citizens and employees in a tactful manner.

Ability to establish and maintain effective working relationships with employees, landowners, contractors, government officials, and the public.

Ability to communicate effectively both orally and in writing.

**Physical Demands:**

Ability to walk long distances in fields, along uneven terrain.

Intermittent sitting, standing, and walking; occasional driving.

Lifting 30 pounds maximum with frequent lifting and/or carrying of objects weighing up to 20 pounds.

Withstanding temperature changes in the work environment.

Distinguishing people or objects at varied distances under a variety of light conditions.

Distinguishing sounds at various frequencies and volumes.

Tolerating exposure to outside/site elements such as heat, cold, water, mud, animal waste, dust, pollen and fumes.

New: 01/01/14

HUMAN RESOURCES DEPARTMENT

Brown County

305 E. WALNUT STREET
P.O. BOX 23600
GREEN BAY, WI 54305-3600

PHONE (920) 448-4071 FAX (920) 448-6277 WEB: www.co.brown.wi.us

WARREN P. KRAFT

HUMAN RESOURCES DIRECTOR

## RESOLUTION/ORDINANCE SUBMISSION TO COUNTY BOARD

**DATE:** 03/09/15

**REQUEST TO:** Land Conservation Subcommittee
Planning, Development & Transportation Committee

**MEETING DATE:** 03/23/15

**REQUEST FROM:** Warren Kraft
Human Resources Director

**REQUEST TYPE:** ☒ New resolution ☐ Revision to resolution
☐ New ordinance ☐ Revision to ordinance

**TITLE:** Resolution Regarding Change in Table of Organization for the Land and Water Conservation Department (Agronomist Technician)

**ISSUE/BACKGROUND INFORMATION:**

There is an opportunity for the Land and Water Conservation department to accept grant funding to participate in the *Targeting Outcome-Based Sediment Reduction in the Lower Fox Watershed* project.

**ACTION REQUESTED:**

Add a grant funded 1.00 FTE Agronomist Technician to the Land and Water Conservation table of organization to complete the work required in the grant.

**FISCAL IMPACT:**

***NOTE:*** *This fiscal impact portion is initially completed by requestor, but verified by the DOA and updated if necessary.*

1. Is there a fiscal impact? ☒ Yes ☐ No
   a. If yes, what is the amount of the impact? $55,091 (4/1/15 – 12/31/15) / $73,454 annually
   b. If part of a bigger project, what is the total amount of the project? $_____
   c. Is it currently budgeted? ☐ Yes ☒ No
      1. If yes, in which account? _____
      2. If no, how will the impact be funded?

         Through a grant applied for by the Fox Wolf Watershed Alliance on behalf of Outagamie, Calumet and Brown counties for the five year project beginning in 2015.

☒ **COPY OF RESOLUTION OR ORDINANCE IS ATTACHED**